

United States Department of Agriculture,

DIVISION OF POMOLOGY.

NOTES ON PEACH CULTURE.

By J. H. HALE, *Connecticut*.

Although a native of a foreign country, nowhere on the face of the globe does the peach thrive so well as in the United States of America, and with the exception of a portion of northern New England and a little of the central Northwest, peaches can be grown in every section of our great country. At present they are most largely grown commercially in western Georgia, New Jersey, Delaware, Maryland, Connecticut, western New York, western Michigan, southern Missouri, western Colorado, and California. No doubt there are many sections susceptible to the development of profitable peach culture on a large scale, but the right men to inaugurate and develop these possibilities in each particular section have not yet come to the front.

The rapid development of the business in southwest Georgia is a noted example of what can be done after a right start is made. Within a radius of 8 miles of Fort Valley, Ga., there are orchards aggregating over 1,000,000 trees, nearly all planted within the last five years, stimulated by the success of Mr. S. H. Rumph, originator of the Elberta peach. My own orchard of 100,000 trees is just outside of the city limits, and was established in the winter of 1891-92 on an old cotton plantation that had been purchased a year before. After visiting every peach-growing section in the United States, I selected this as the one likely to prove most satisfactory and profitable. Here were cheap land and cheap labor, so far south that large late varieties could be ripened and put in market before the small inferior varieties from the central sections, and yet not more than 1,000 miles away from 80 per cent of the consuming population of the country—Boston and Denver being about equally distant from this Georgia center.

Edgewood farm is situated on a broad, level plateau, of some 600 feet elevation. Before planting the orchard the land was surveyed in blocks 500 by 1,000 feet, with broad avenues running north and south, and cross streets east and west. Thrifty June-budded trees, straight whips 15 to 30 inches high, were planted, after being shortened to 12 or 15 inches; all the roots, except a few stubs 1 to 1½ inches in length, being cut away. The entire 100,000 trees were thus pruned. These trees were quickly yet well planted in soft, mellow ground by simply pushing a straight-back Ames spade 6 to 8 inches down and pressing it forward a little to make room enough to insert the root-pruned tree at proper depth. Pulling out the spade and firming about the tree with the feet completed the operation of planting. The surveying, platting, checking off rows, pruning and planting, were all done at a cost of less than one-half cent per tree. Ninety-nine and one-half per cent of the trees started and made a fine growth, and now, at the end of three years, the orchard is a model of its kind.

After planting the trees each had scattered about it one-half pound of cotton-seed meal and cotton-hull ashes, mixed half and half. This was turned under during March, when the whole orchard was plowed with modern steel plows to a depth several inches greater than was ever before known in that section, a subsoil plow being used in many cases.

Cotton, corn, and nursery stock were grown between the trees the first year, and in July every vacant spot was sown to cowpeas, and the past two seasons peas and soja beans have covered the entire orchard after midseason, no other fertilizer being applied except a very little in a few spots where growth was not quite up to the standard. Tree growth in that part of Georgia begins early in February and ceases in September, so that pruning may be done at any time in November, December, or January, and is carried out on the same lines as in the Connecticut orchards, except that as fruit buds are seldom killed in winter in that part of Georgia it is always done before buds begin to swell in February.

The disease called "yellows" is not known, but spring frosts in March after the fruit sets are a serious drawback to success, and must always be counted on to come quite frequently; yet there have been but two total failures of the peach crop in this region for twenty years past.

The Elberta is a native of the section, and is undoubtedly the best market peach known there, and so the mistake has been made of planting too many of this variety and not enough of earlier and later kinds; so that in seasons of abundance the markets are likely to be taken by surprise with the luscious Elberta and not as able to handle all at as good prices as they would have been had earlier varieties been more plentiful, and thus paved the way for this delicious variety. Other sections of Georgia have also developed great orchards, and extensive plantings are also being made in southern Missouri and Colorado, but as yet none on quite as large scale as in Georgia.

Twenty or more years ago there was hardly an acre of commercial orchard in Connecticut, while now each year from the middle of August to October that State has not only her own supply of peaches but thousands of baskets to send to her less fortunate neighbors. Before embarking in the business of peach growing I thought I had learned at least two essential things: (1) That peaches required high, dry, rolling land, with perfect frost and water drainage, and (2) that they must have thorough and frequent culture. Subsequent events proved these conclusions fully warranted, and developed other essentials to success. So at this time I feel that, while there is yet much to learn, we do understand the basic principles of successful peach culture in Connecticut. To my mind they are:

- (1) High, dry, sandy, or sand loam soil.
- (2) Careful selection of varieties most hardy in fruit bud.
- (3) Vigorous, healthy seedling stocks, budded from bearing trees of undoubted purity and health.
- (4) Trees given entire possession of the land from the start.
- (5) Thorough culture from the opening of spring till the first or middle of August.
- (6) Liberal annual manuring, broadcast with commercial manures rich in potash and phosphoric acid and lacking in nitrogen.
- (7) Low heading and close annual pruning for the first five years.
- (8) Keep out most borers with some suitable wash and dig out all others.
- (9) Search for traces of yellows every week of the growing season, and at first sign pull up and burn every infested tree.
- (10) Thin the fruit so that there shall never be what is termed a full crop.

On these ten commandments hang most of the law and all the profits.

An orchard established on these lines in this latitude may confidently be depended upon to fruit nearly every year, there seldom being an entire failure of the crop; for even though 90 per cent of the fruit buds be killed by extreme frosts of winter the remaining 10 per cent will usually give a profitable crop. Indeed, following out these lines, I have not for eight years failed of having fruit each season; two crops very light indeed, three others when only a little thinning had to be done, and four when from one-half to four fifths of all the fruit that "set" had to be picked off in its early stages to permit the rest to come to fullest maturity. One tract of 22 acres of sandy plains land leased ten years ago for a term of fifteen years on a basis of 6 per cent on the owner's valuation, has given four crops the net profits on which have been forty-two times the owner's valuation of the land and nearly sixty times its assessed value; that is, for a series of ten years, including the first three, taken to establish the orchard, the net profits from 22 acres of so-called "worn-out land" have been each year six times the assessed value of the land itself.

Our earliest plantings were a rod apart each way, and were so continued for some years. For the sake of experiment in 1884, when planting the 22-acre orchard before referred to, 11 acres were planted 18 by 18 feet, and 11 acres 12 by 12 feet, 134 trees to the acre on one half, and 300 trees to the acre on the other. This very close planting was only justified by the claim that peach orchards were short-lived any way, and that if full crops should be secured in the early years the greatest profits would come from close planting, while for a long term of years the greater distance would be found most profitable. In the annual application of fertilizer they were fed so much per tree and not per acre. The first full crop was in the fifth year and the close planted returned double the money of the other. There was no crop the sixth year and a light one the seventh, and no account was kept; the eighth year a large crop, and again nearly double money from planting closely. The ninth year a full crop was realized, and over 50 per cent more profit from thick than thin planting. This last year there has

been nearly a full crop, with 25 per cent greater profit from the close half. For the whole term the 11 acres close planted is ahead over \$7,000 in net profits, and I do not think it possible in its declining years that the 18 by 18 tract can ever reduce this lead very materially, although I look to see the tide turn that way in future crops. With this close planting there was, of course, very close annual pruning.

Finding 12 by 12 so very profitable, but a little crowded for the best working of the land, we have in all plantings here in the last four years put the trees 13 by 13 feet, 357 trees per acre; also in establishing an orchard of over 100,000 trees at Fort Valley, Ga., planted the same way, and at present see no reason to regret it.

Straight rows at equal distances apart are essential to best and most economical culture, and when the question of distance has been settled check off the rows in any way that will surely attain this result; holes should be dug as broad and as deep as actually required to contain the roots; in each of these scatter a big handful of very fine bone and two or three more over the mound of earth that has come out of it. This will become incorporated with the soil when filling in about the roots of the tree, which should be set a little deeper than it grew in the nursery row. With the feet firm the earth thoroughly about the roots, and when the orchard is planted scatter about the trees a foot or more away a pound and a half of muriate of potash or its equivalent in unleached hard-wood ashes. Trimmed to a single stem the peach tree, as soon as growth begins, will push sprouts all the way along from the ground up. All of these should be rubbed off except three or four near the top, which should be reserved to form the main branches of the future tree. Some make the objection that a tree thus formed is likely to have forking branches that split down easily when full of fruit. I have not found it so. Still, the forking branches may be avoided by pruning the tree at planting up to say 2½ feet, and here leave three side branches, shortened to 6 or 8 inches; another foot or so of clear main stem and then three or four side branches, shortened to 4 or 5 inches; then, by forcing most of the new growth to start from near the tops of these side branches a tree may be formed without forking branches.

Occasionally when crowded for room we have planted some small hoed crop among the trees the first two years; yet the best culture can be given the trees only when they have the entire use of the land. We have found that the best of culture, at the least labor cost, may be had by alternately using Cutaway and Acme harrows at intervals of ten days or two weeks, and two or three times during the season working close up to the tree with a one-horse cultivator of most approved pattern. Seldom does it become necessary to use hand hoes of any kind. All culture should cease at least six weeks before the end of the growing season, or from August 1 to 15, in the northern and central sections of our country. As before stated, manures rich in potash and phosphoric acid and lacking nitrogen are best suited to the peach. This should not be taken to imply that nitrogen is not to be countenanced in the orchard. The danger from a too liberal use of nitrogen with the peach is that it is likely to stimulate a too rapid and too tender growth that will unfit the fruit buds to withstand the frosts of winter and the freezing and thawing of early spring. A fair proportion of nitrogen is, however, essential to the early growth and maturity of the young orchard. When bagged up in any of its commercial forms for farm use it costs all the way from 16 to 25 cents per pound, and yet it may be gathered from the atmosphere free of cost by some of the many leguminous plants that can be grown at a season of the year when the orchard land would otherwise be idle. I deem it a wise plan to sow the orchard at suitable season with some of these useful plants, to act not only as "nitrogen traps" through the growing season, but also to serve as a mulch during the dormant period.

A yearling orchard of 10 acres was sown last season with soja beans in drills 3 feet apart early in July. A one-horse cultivator used between the rows three or four times before the middle of August was enough to stimulate their best growth and at the same time keep the trees growing well. When frost came these beans were 3½ to 4 feet high, and a solid mass which, when packed down by snow, makes a grand mulch and will supply nitrogen and organic matter to be plowed under in early spring. Another orchard was treated to cowpeas in much the same way, while for several years past in older orchards we have by the middle of May each year turned under a rank growth of crimson clover that had been sown at the last orchard harrowing in the previous August. This on light sandy lands has not supplied more nitrogen than is required for the best tree development, but on stronger lands it is doubtful if it would be wise to continue the clover after the trees have reached a bearing age.

Overfed, overgrown, short-lived, one crop trees in the nitrogenized family garden are constantly pointing out to us the fact that peach trees can not be grown in that way with any degree of success. Where green crops are in the orchard through the winter mice are apt to abound, and to guard against their depredations and at the same time protect the young tree from the various climatic difficulties that beset it, I like to mound up a few shovelfuls of earth at its base at the approach of winter; the labor cost is but slight, the advantages many, and the earth easily tumbles away at first cultivation in spring. If the ground is inclined to be hard, or if clover or vetches have been grown, the annual culture should consist of one shallow plowing in spring and frequent surface cultivation all through the early part of each summer; while, if the ground is of a light, mellow nature and no green crops are to be turned under, plowing may be dispensed with entirely, and thus the all too frequent, injudicious, and injurious, careless plowman's root-pruning may be avoided. By starting the Cutaway harrow right after frost dries out in spring before the surface becomes dry and hard the orchard can be thoroughly fitted for summer culture. Our best tilled and most healthy orchard has not had a plow in it for six years now, and probably never will have again. To make this plan a success, harrowing must begin early.

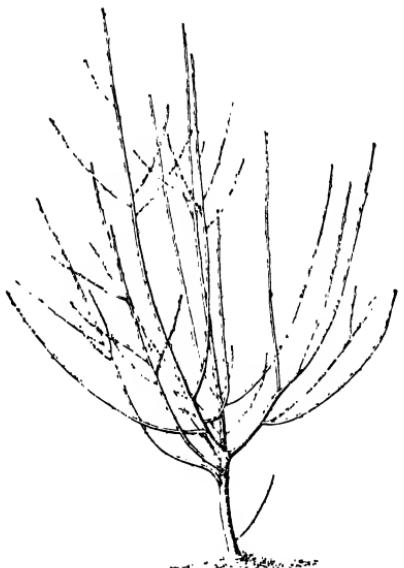


FIG. 1.—Peach tree 1 year old before pruning.

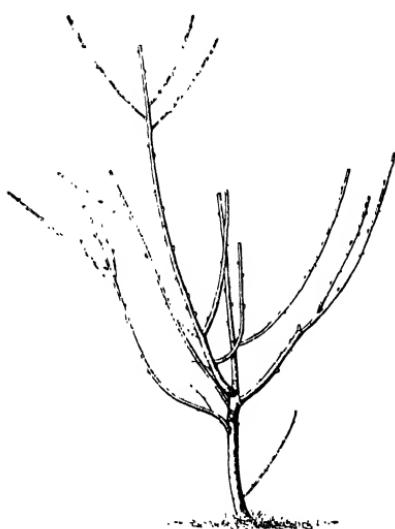


FIG. 2.—Peach tree 1 year old after pruning.

As to manuring, after the first year all manures should be broadcasted. Lands in a good state of fertility, such as would be considered good corn or wheat lands, should have from 800 to 1,200 pounds of fine-ground bone and 300 pounds of muriate of potash or its equivalent per acre. Poorer lands should have proportionately more, up to a ton of bone and 600 to 800 pounds of potash. This should be kept up every year whether the trees fruit or not, which they will do sometime, and no man knoweth what year the peach crop cometh. In our own orchards we fertilize even more highly than here recommended and find it exceedingly profitable. Size, beauty, and flavor can not be combined in the peach without the aid of potash and phosphoric acid.

Young trees started the first year, as I have indicated, being allowed to grow at will all the season, should have their three or four leading branches make a growth of from $2\frac{1}{2}$ to 4 feet each. Fall and early winter pruning have not been satisfactory with us, and therefore all pruning is delayed until late winter or early spring.

In the earlier days it was my custom in trimming trees one year planted to cut branches back to within a foot or 15 inches of the main stem; but as this tends to form a rather too close head for the foundation year I now prefer to leave the first season's growth $2\frac{1}{2}$ to 3 feet long, and to reserve the severe shortening in for the second, third, and fourth years, particularly the second and third years.

Besides the main branches to be cut away the first year, it will be necessary to cut off some lateral branches entirely and to shorten others somewhat. With the liberal culture and manuring recommended each of the three or four main branches will in the second year throw out from their tips two or three leaders, each of which should make a growth of 3 to 4 feet. In the early spring following pruning should begin with the object of building a broad, low, open-headed tree. This is best accomplished by first thinning out all crowding inside branches and leaders and shortening in all others from one-half to three-fourths of the new year's growth, the closest cutting being in the central top. The third year's work should be on the same general plan, and it will often be found, unless the second year's work was exceedingly well done, that some of the third year's work ought to have been done the second, not enough thinning out having been accomplished. The object of the first three years' pruning should be to establish a well-formed tree best suited to forcing the greatest amount of fruit to the highest perfection at the least possible cost. (Figs. 1 and 2.)

After the right sort of tree has been established and trees have reached a bearing age, pruning for a year or two more may be continued partially on the line of a correct form, but more particularly as relating to fruit production. And so right here we have abandoned late winter and early spring pruning and do most of the work after the fruit buds begin to swell, so that we can judge on inspection which are alive and which are dead. In years when very few buds have survived the frosts of winter, pruning should be done with the object of retaining a great majority of the living buds regardless of tree form, which can usually be somewhat righted the next year. Of course in years when a good number of buds are found alive pruning can be continued for form, but as the tree grows older less and less pruning will be required.

The methods here described have in their early years given handsome, even-headed, well-rounded trees, which have been exceedingly profitable, although in later years they have become less shapely.

As it is results, fruit results and dollar results, that count in commercial peach culture, we judge the method to be a decided success, at least for sections where winter killing of fruit buds is the greatest drawback to success, and we shall follow it till some better plan presents itself. (Figs. 3 and 4.)

Borers are always more or less troublesome in every section, especially to young trees. I have found that a wash made of 10 pounds of potash and 1 quart of crude carbolic acid to each 50 gallons of water, with lime enough added to make it adhere during all the early part of the season, will keep the most of them out. This thick wash should be carefully applied all about the base of the tree and in crotches of the main branches early each May.

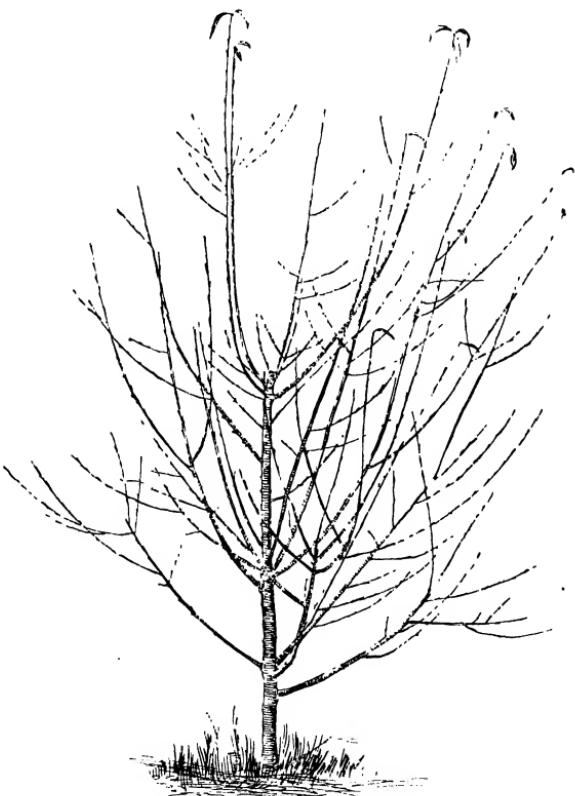


FIG. 3.—Peach tree 2 years old, before pruning.

This should be followed up by an inspection of each tree in October and digging for borers whenever there is any trace of them. In the South, where cotton-hull ashes are abundant and cheap, we use these as our source of potash and also partly in place of lime. Once we have made the mistake of making the wash too strong of potash, and so have scalded the bark on some of the young trees.

A single tree or orchard established on the lines here laid down is almost certain to give some fruit nearly every year, and in a majority of seasons more than the trees can well sustain. There should be no "off year" with peaches, except when fruit or blossom buds are entirely killed by frosts; for right culture, proper feeding, and pruning should each year stimulate new growth to furnish far more fruit buds than are required for abundant crops. The right selection of location, soil, and variety will materially aid in overcoming climatic conditions, so that in frequent years we are confronted with the problem of what to do with the surplus fruit. Overbearing is the besetting sin of the peach tree; judicious pruning holds this in check somewhat, and in seasons of overabundance almost reckless pruning may be admissible as the quickest way to dispose of much of the surplus fruit, after which hand picking of the green fruit will have to be resorted to.

A well-grown 6-year-old tree will often set as many as 3,000 to 4,000 peaches, which, if reduced to 500 or 600, will give as many pounds or bushels as the greater number, be more beautiful in color, better in quality, and if offered in the market sell for three or four times as much, while not affecting the vitality of the tree to nearly so great a degree as it would had the greater number been allowed to mature. At first sight it looks like a big undertaking to pick by the hand all the way from 2,000 to 3,000 peaches from each one of the thousands of trees in a commercial orchard. It is not half so difficult as it looks, and if it were it must be done if finest fruit is to be expected. Thinning can not be done with safety till after the so-called "June drop," which usually takes place after the peaches are one-half inch or more in diameter. This drop and curculio stings should always be taken into consideration, so that we seldom begin to thin peaches until they are three-fourths of an inch in diameter. We then pick by hand every peach

that is stung or in any way diseased or disfigured, and put them into bags

FIG. 4.—Peach tree 2 years old, after pruning.

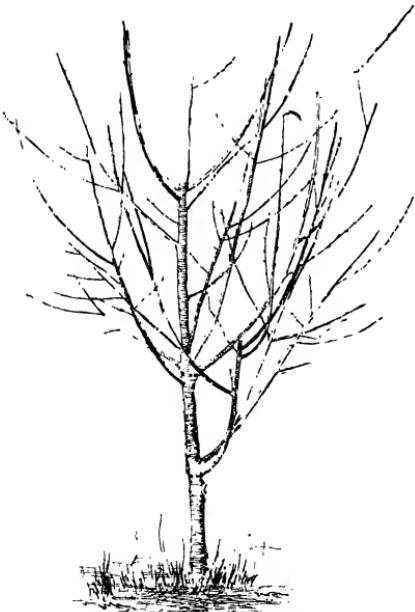
to be carted away and cremated, after which we continue and drop to the ground the great bulk of the crop, leaving on the trees the best specimens so far as possible, not less than 4 and usually 5 or 6 inches apart. Even with this treatment the maturing crops have often admonished us to thin more next time rather than less.

While harvesting last September I resolved that the rule for the future should be not more than 150 peaches to be left on any 3-year-old trees, 250 for 4-year trees, 400 for 5-year trees, and seldom more than 600 for trees of any size or age.

Six hundred peaches may make 1 bushel or six. If the 600 are a part of the 5,000 or 6,000 that a full-sized tree often might attempt to mature, it is likely to be 1 bushel; while if the 600 be the selected few from the many that were rejected at the thinning-out time, it is more than likely to be 6 bushels instead of 1. And, judging from a money basis in our orchards for a series of years, the ratio is not less than 16 to 1, proving conclusively to my mind that thoroughly thinned peaches are fruits of gold.

Culture notes on the peach would be incomplete without a word in relation to the yellows.* When we commenced here twenty years ago we were told that

* For illustrated description of symptoms of yellows, see United States Department of Agriculture, Farmers' Bulletin No. 17, p. 7, by Erwin F. Smith.



the yellows had driven the peach from our State many years before, and that our attempt at culture was foolhardy. My study of the disease of those early days showed me that, while it prevailed everywhere, some trees were more surely and quickly attacked and destroyed than others. Rank, thrifty young trees of the lowlands and in the highly-fed home grounds suffered more than trees of like variety back on the hills, leading to the belief that at least one way to hold the disease in check was to surround the trees with those influences which tend toward a moderately healthy wood growth every season and as even a temperature as possible throughout the winter and early spring.

These conditions are also essential to the best development and protection of fruit buds. Our selection of soil and location and our methods of culture and feeding have all tended that way. We were entirely free from this disease for the first eight years, in orchards of 6,000 trees, and now have a block of 16-year-old trees where never a trace of the disease has shown itself. After the eighth year the disease showed itself in the older orchards, and has since broken out in younger orchards of various ages, twice directly traceable to the nursery, as the disease developed the first year after planting.

At the first sign of the disease trees are pulled up, root and branch, and burned. I do not doubt that the disease is contagious, and my personal experience convinces me that it is sure to spread to the adjoining trees nearest, so that on finding a single tree diseased with yellows in any young orchard, I destroy not only this but the four next adjoining. This treatment has several times entirely checked the spread of the disease at this point, while in other cases, where only the tree showing the disease had been destroyed, the surrounding ones manifested it the next year, and so each year a more rapidly widening circle spread, harder to hold in check.

Ten per cent of all the peach trees inspected by the Connecticut peach yellows commissioners in 1893 were found to have yellows. Our own orchards showed less than 1 per cent, and for the season of 1894 the ratio of percentages remains about the same in the State at large and in our orchards. Until, therefore, we know more about the yellows than we do now, we shall continue our work along the lines indicated.*

The yellows is entirely unknown in the extreme South and on the Pacific Coast, which seems to me to be an indication that it is subject to climatic influences, while my own experience leads me to believe that it may be, in a considerable degree, held in check by a right selection of soil, location, and proper feeding.

All careful growers and observers agree that on the first appearance of the disease the tree should be destroyed root and branch.

The first symptoms, especially on thickly, vigorous, dark green foliated trees, is a thick clustering of leaves on some one or more of the stronger branches. These leaves will often have a slight crinkly appearance and a shade of lighter yellowish green running through them, not seen in the rest of the foliage. This is a sign that will show in bearing trees one year, and often two years, before the fruit gives any sign, and on young nonbearing trees it precedes the "tip" growth on "water sprouts" or leading branches.

* The statement that the disease is sure to spread to the adjoining trees nearest is contrary to the recorded observations of the special agent of the Division of Vegetable Pathology of this Department, Dr. Erwin F. Smith. A record of these observations will be found in Bulletin No. 4, Division of Vegetable Pathology, published in 1893. In one orchard, that of James W. Green, Magnolia, Del. (Series III, Pl. XXV), which was under observation during a period of six years (1887 to 1892, inclusive), the diseased trees were marked and recorded each year. As they were allowed to remain in the orchard, it may be assumed that the infection of other trees proceeded in the normal manner. An examination of the plat showing the recorded progress of the disease in this orchard reveals the fact that, though it spread rapidly, resulting in the infection of over 95 per cent of the trees in the orchard within seven years after the first cases appeared, it did not spread in circles, nor were the trees adjacent to diseased ones more likely to show the symptoms the next year than those more distant. Had the cutting out of the four trees adjoining each diseased tree been practiced in this orchard several hundred trees, which actually remained healthy for two, three, or four years after their neighbors were diseased, would have been unnecessarily sacrificed, and their yield of fruit during that time would have been lost. It is evident that this would have resulted in a very serious shrinkage of orchard revenues with no apparent compensatory benefits. This orchard is only one of many in which similar observations are recorded.

The systematic cutting out of diseased trees under the operation of the Connecticut yellows law began in 1892, and the number of trees condemned by the peach yellows commissioners in the State in that year included, in many instances the accumulated cases of several years. In Mr. Hale's orchards, trees had for several years been removed as soon as they showed symptoms of the disease. It is therefore quite probable that the comparatively small percentage of diseased trees in Mr. Hale's orchard in 1892 and 1894 was due not to the removal of the adjacent trees that showed no symptoms of the disease, but rather to the fact that the diseased trees had been removed in previous years as soon as discovered.

As to varieties, our earlier plantings were made with a view to covering the longest season with the best family and market varieties then to be procured, no intimation being given us that some were more hardy in fruit bud than others; and only by years of experience in the orchard here, and the close observation of many others, has it been clearly proven that there is a vast difference with varieties in this respect.

Of the older sorts, Alexander and Hill Chili are most hardy, but neither of them is very profitable. Next in hardness we find Mountain Rose, Oldmixon, Stump, Fox (seedling), Ward Late, and Keyport, all fine table and market varieties, with white flesh. Yellow-fleshed varieties of the Crawford class are most tender. Now in later years we have the Crosby, Elberta, and Brigdon, all yellow peaches of extreme hardness and great value. In New England the Crosby has not failed to fruit every year since first known, some fifteen years ago. All our northern plantings for the last five years have been entirely of Mountain Rose, Oldmixon, Stump, Crosby, and Elberta, and for two years past we have planted only the last two.

The greatest profits can only be secured through the most careful handling, honest packing, and prompt delivery of the fruit into the homes of consumers, in the most attractive package possible to secure, consistent with reasonable economy.

Our fruit is not picked until it reaches full maturity in size and color, this to be judged entirely by the color of the under or most shaded side of each peach, without handling it until after it has been decided to pluck it. Gathered at this stage, they should be in fair eating condition within twenty-four hours, in perfect condition in forty-eight hours, and yet, if rightly handled, most of them will keep nicely from three to five days or even longer if paper wrapped.

After being plucked from the trees into shallow 12-quart picking baskets, the fruit is hauled to the packing shed in a low, broad-tired orchard spring wagon constructed expressly for that purpose. Arriving at the shed, the baskets are placed on an assorting table, where all sound, well-formed, right-colored peaches above $1\frac{1}{2}$ inches in diameter are graded into three sizes: "Extras," those $2\frac{1}{2}$ or more inches in diameter; "No. 1," $2\frac{1}{2}$ to $2\frac{3}{4}$ inches, and "seconds," $1\frac{1}{2}$ to $2\frac{1}{4}$ inches. As fast as assorted, each of these grades is packed directly in the marketing baskets. Peaches a little off in color or form make two grades of "culls," large and small, and are sold without label or guaranty. "Softs" and "specks" are sold at the shed for local consumption, or to peddlers, and make the total of seven grades that each assorter is expected to make. The percentage of each, of course, will vary with the season and variety, but to the 100 baskets they run with us about 37 baskets of "extras," 35 of "No. 1," 14 of "seconds," 5 of "large culls," 4 of "small culls," 3 of "softs," and 2 of "specks." The last three grades being practically the refuse of most orchards, they perhaps would not be counted, and so make a still better showing for the others; but as our good local markets make them worth 50 cents to \$1 per bushel at the shed, everything is worth saving here, and is daily gathered from under the trees and brought to the packing shed. Now and then a few baskets of "specks" are unsold, but even such a small quantity is worth while looking after carefully every day of the season.

The peach business of to-day is of such vast importance, and responds so readily and bountifully to closest care and attention, that its highest possibilities can only be attained by earnest thought and attention every day in the year, and the greatest rewards will surely come to those who pay closest attention to every detail of the business.

WASHINGTON, D. C., November 20, 1897.

